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RESIN SEALED SEMICONDUCTOR DEVICE

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Abstract:

PURPOSE: To prevent an air gap from occurring between a heat dissipation fin and a first seal part, in a double-molded type resin sealed semiconductor device, by gradually reducing the distance between the first resin seal part and the planar heat dissipation fin toward the bed part of a lead frame.

CONSTITUTION: A semiconductor element 2 is mounted on a bed part 1, which is the conductive metal plate of a lead frame. A pad 2' and an inner lead terminal 3 or 4 are connected with a thin metal wire 5. After the thin wire 5 is covered with an encapsulating agent 6, a first resin seal part 7 is formed. At this time, the seal is performed so that the rear surface of the bed part 1 is exposed. The bed part 1 and a planar heat dissipation fin 8 are arranged in a metal mold with a slight gap C1 being provided. A second resin seal part 9 is formed. Here, gaps C2 and C3 are formed between the seal part 7 and the fin 8 so that the flow path of the second resin is gradually reduced toward the gap C1. Since the gap C1 is excellently filled with the second resin, voids do not remain, and the heat dissipation characteristic becomes excellent.

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